

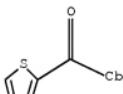
FILE 'HCAPLUS' ENTERED AT 16:52:51 ON 21 SEP 2009  
L1 1 S US 20070149787/PN

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L2 1 S 88-15-3/RN  
SET NOTICE 1 DISPLAY  
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L3 STRUCTURE uploaded

L3 STRUCTURE uploaded

=> d 13  
L3 HAS NO ANSWERS  
L3 STR



L4 47 S L3 SSS SAM  
L5 12581 S L3 SSS FULL

FILE 'HCAPLUS' ENTERED AT 16:58:13 ON 21 SEP 2009  
L6 3951 S L5  
L7 1927 S L5/PREP  
L8 17217 S (CATION? EXCHANGE? RESIN?)  
L9 0 S L7 AND L8  
L10 176294 S (ION? EXCHANGE?)  
L11 2 S L7 AND L10  
L12 19481 S CATION EXCHANGERS/IT  
L13 1 S L12 AND L7

L13 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2009 ACS on STN  
TI Process for preparation of 2-acylthiophene derivatives  
AB This invention pertains to a method for producing 2-acylthiophene compds., characterized by reacting a thiophene compound with an acid anhydride or an acid halide in the presence of a solid acid catalyst at a temperature lower than 75 °C in the absence of any solvent. This invention provides a convenient method to prepare 2-acylthiophene derivs. with reduction of 3-acylthiophene byproduct.

ACCESSION NUMBER: 2005:564653 HCAPLUS [Full-text](#)  
DOCUMENT NUMBER: 143:97257  
TITLE: Process for preparation of 2-acylthiophene derivatives  
INVENTOR(S): Bando, Seiji; Satake, Syuzo; Kagano, Hirokazu  
PATENT ASSIGNEE(S): Sumitomo Seika Chemicals Co., Ltd., Japan  
SOURCE: PCT Int. Appl., 18 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005058866 20041213	A1	20050630	WO 2004-JP18569	
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,				
MR, NE, SN, TD, TG CA 2544286 20041213	A1	20050630	CA 2004-2544286	
EP 1695972 20041213	A1	20060830	EP 2004-806930	
R: CH, DE, ES, FR, GB, IT, LI CN 1886396 20041213	A	20061227	CN 2004-80035125	
CN 100455578 IN 2006DN02337 20060427	C	20090128		
US 20070149787 20060518	A	20070803	IN 2006-DN2337	
PRIORITY APPLN. INFO.: 20031217		20070628	US 2006-579734	
20041213			JP 2003-419362	A
			WO 2004-JP18569	W

L14            1895 S ACYLATION CATALYSTS/IT  
 L15            15 S L7 AND L14  
 L16            11 S L15 AND (PY<2003 OR PRY<2003 OR AY<2003)

L16 ANSWER 2 OF 11 HCPLUS COPYRIGHT 2009 ACS on STN  
 TI Process and catalysts for the synthesis of cyclopentyl 2-thienyl ketone

AB            tiletamine and tiletamine acid addition salts such as tiletamine hydrochloride

AB            Solid, noninert-containing catalysts can be used for the high-yield synthesis of cyclopentyl 2-thienyl ketone by the reaction of

cyclopentanecarboxylic acid chloride and thiophene. Aluminum trichloride is both cheaper than stannic chloride and it is easier to deal with as a waste stream. The use of graphite as a catalyst for the acylation of thiophene with cyclopentanecarboxylic acid chloride is demonstrated. Cyclopentyl 2-thienyl ketone is then brominated with bromine to produce 1-bromocyclopentyl 2-thienyl ketone which is then aminated with EtNH<sub>2</sub> to produce 1-hydroxycyclopentyl 2-thienyl N-Et ketimine which is then subjected to a thermal rearrangement by refluxing in o-dichlorobenzene to yield 2-(ethylamino)-2-(2-thienyl)cyclohexanone which can be saponified with HCl in the same solvent without isolation to give the corresponding hydrochloride salt.

ACCESSION NUMBER: 1999:671043 HCAPLUS Full-text  
DOCUMENT NUMBER: 131:271804  
TITLE: Process and catalysts for the synthesis of cyclopentyl 2-thienyl ketone tielatamine and tielatamine acid addition salts such as tielatamine hydrochloride  
INVENTOR(S): Lapin, Yuri Aleksandrovich; Sanchez, Ignacio H.  
PATENT ASSIGNEE(S): Great Lakes Chemical Corporation, USA  
SOURCE: U.S., 7 pp.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5969159	A	19991019	US 1999-250368	
19990216 <-- WO 2000049012	A1	20000824	WO 1999-US18569	
19990816 <-- W: CA, IL RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				

PRIORITY APPLN. INFO.: US 1999-250368 A  
19990216 <--  
OTHER SOURCE(S): CASREACT 131:271804  
IC ICM C07D333-22  
INCL 549076000  
CC 27-8 (Heterocyclic Compounds (One Hetero Atom))  
Section cross-reference(s): 67  
IT Acylation catalysts  
(aluminum chloride or graphite for the acylation of thiophene with  
cyclopentanecarboxylic acid chloride in the preparation of  
cyclopentyl 2-thienyl ketone)  
IT 4524-93-0P, Cyclopentanecarboxylic acid chloride 14176-49-9P,  
Tielatamine 17556-56-0P 94139-04-5P 99186-05-7P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP  
(Preparation); RACT (Reactant or reagent)  
(process and catalysts for the synthesis of cyclopentyl 2-

thienyl

ketone tiletamine and tiletamine acid addition salts such as  
tiletamine  
hydrochloride)  
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS  
RECORD  
(1 CITINGS)  
REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE  
FOR THIS  
FORMAT  
RECORD. ALL CITATIONS AVAILABLE IN THE RE

L16 ANSWER 3 OF 11 HCAPLUS COPYRIGHT 2009 ACS on STN  
TI Environmentally friendly catalysts for acylation reactions  
AB Solid acid catalysts were studied in the acylation of activated organic substrates to study the possibility of replacing AlCl<sub>3</sub>, due to its environmental constraints. Unlike with toluene, in the acylation of mesitylene using catalytic ams. of solid acid catalysts yields comparable to that with AlCl<sub>3</sub> were observed using benzoyl chloride, while with the other acylating agents (propionoyl, 2-chloropropionoyl, acetyl chloride or acetic anhydride) lower values were obtained as a function of the strength and stability of the carbocation formed. However, in comparison to AlCl<sub>3</sub>, in all cases the solid acid catalysts considerably reduced the formation of byproducts due to mesitylene or other polymerization reactions. For the catalysts studied, the following scale of reactivity was detected: acid treated clays > pillared clays > clays > zeolites, as a function of the accessibility and acidity of the active sites, surface area and nature of the pillar constituent. The interesting behavior of com. acid treated clays was confirmed by the acylation of thiophene with p-fluorobenzoyl chloride, with almost complete formation of the 2-isomer, useful intermediate for a pharmaceutical active ingredient.

ACCESSION NUMBER: 1998:715068 HCAPLUS Full-text  
DOCUMENT NUMBER: 129:330370  
ORIGINAL REFERENCE NO.: 129:67383a,67386a  
TITLE: Environmentally friendly catalysts for  
acylation  
reactions  
AUTHOR(S): Campanati, M.; Fazzini, F.; Fornasari, G.;  
Tagliani,  
A.; Vaccari, A.; Piccolo, O.  
CORPORATE SOURCE: Dip. Chimica Industr. e Materiali, Bologna,  
40136,  
Italy  
SOURCE: Chemical Industries (Dekker) (1998),  
75(Catalysis of Organic Reactions), 307-318  
CODEN: CHEIDI; ISSN: 0737-8025  
PUBLISHER: Marcel Dekker, Inc.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
CC 22-4 (Physical Organic Chemistry)  
Section cross-reference(s): 1, 21, 25, 27, 45, 63  
IT Acylation  
Acylation catalysts  
Catalysis

Catalysts  
 Environmental pollution control  
 Friedel-Crafts reaction  
 Friedel-Crafts reaction catalysts  
 Organic synthesis  
 Surface acidity  
 Surface area  
     (environmentally friendly catalysts for acylation reactions)  
 IT 579-49-7P, 2-(p-Fluorobenzoyl)thiophene  
 RL: IMP (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)  
     (environmentally friendly catalysts for acylation reactions)  
 OS.CITING REF COUNT:       9       THERE ARE 9 CAPLUS RECORDS THAT CITE THIS RECORD  
 (9 CITINGS)  
 REFERENCE COUNT:           33       THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L16 ANSWER 4 OF 11 HCAPLUS COPYRIGHT 2009 ACS on STN  
 TI Acylation of aromatics  
 AB The title process takes place in the presence of a catalyst comprised of a rare earth element on a support. Thus, PhOMe was refluxed with BzCl in the presence of a catalyst prepared by deposition of NdCl<sub>3</sub>.6H<sub>2</sub>O on montmorillonite to give a product comprising 94% p- and 6% o-methoxybenzophenone.  
 ACCESSION NUMBER:           1997:802443 HCAPLUS [Full-text](#)  
 DOCUMENT NUMBER:           128:22716  
 ORIGINAL REFERENCE NO.:    128:4455a  
 TITLE:                     Acylation of aromatics  
 INVENTOR(S):              Baudry Barbier, Denise; Dormond, Alain; Montagne,  
                            Fabienne; Desmurs, Jean Roger  
 PATENT ASSIGNEE(S):       Rhone-Poulenc Chimie SA, Fr.  
 SOURCE:                   Fr. Demande, 32 pp.  
 CODEN: FRXXBL  
 DOCUMENT TYPE:           Patent  
 LANGUAGE:                French  
 FAMILY ACC. NUM. COUNT:  1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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FR 2745287	A1	19970829	FR 1996-2481	
19960228 <--				
FR 2745287	B1	19980410		
PRIORITY APPLN. INFO.:			FR 1996-2481	
19960228 <--				
OTHER SOURCE(S):	CASREACT 128:22716; MARPAT 128:22716			
IC ICM C07C049-76				
ICS C07C045-45; B01J023-10				
CC 25-16 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)				
IT Acylation catalysts (acylation of aroms.)				
IT 75-36-5DP, Acetyl chloride, acylation products with 2-				

methoxynaphthalene  
93-04-9DP, 2-Methoxynaphthalene, benzoylation products 111-64-  
8DP,  
Octanoyl chloride, acylation products with 2-methoxynaphthalene  
135-00-2P, 2-Benzoylthiophene 611-94-9P, p-Methoxybenzophenone  
642-29-5P, 1-Benzoylnaphthalene 644-13-3P, 2-Benzoylnaphthalene  
2553-04-0P, o-Methoxybenzophenone 2719-27-9DP, Cyclohexylcarbonyl  
chloride, acylation products with 2-methoxynaphthalene 2936-65-  
4P,  
Methanone, cyclohexyl(1-naphthalenyl) 3282-30-2DP, Pivaloyl  
chloride,  
acylation products with 2-methoxynaphthalene 6453-99-2P,  
3-Benzoylthiophene 7469-80-9P, Methanone, cyclohexyl(4-  
methoxyphenyl)  
10404-26-9P, Methanone, cyclohexyl(2-naphthalenyl) 111504-19-9P,  
Methanone, cyclohexyl(2-methoxyphenyl)  
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP  
(Preparation)  
(acylation of aroms.)  
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS  
RECORD  
REFERENCE COUNT: 4 (1 CITINGS)  
FOR THIS THERE ARE 4 CITED REFERENCES AVAILABLE  
FORMAT RECORD. ALL CITATIONS AVAILABLE IN THE RE

L16 ANSWER 8 OF 11 HCPLUS COPYRIGHT 2009 ACS ON STN  
TI 5-(5-Methyl-2-thenoyl)salicylic acid  
AB The title acid (I) was prepared from Me salicylate and a 2-thenoyl chloride derivative. Thus, Me salicylate was acylated by 5-methyl-2-thenoyl chloride and AlCl<sub>3</sub> catalyst in Cl<sub>2</sub>CHCHCl<sub>2</sub>, and subsequent saponification gave I.  
ACCESSION NUMBER: 1986:129643 HCPLUS Full-text  
DOCUMENT NUMBER: 104:129643  
ORIGINAL REFERENCE NO.: 104:20505a,20508a  
TITLE: 5-(5-Methyl-2-thenoyl)salicylic acid  
INVENTOR(S): Foguet Ambros, Rafael; Forne Felip, Ernesto;  
Sacristan Munoz, Aurelio; Ortiz Hernandez, Jose A.  
PATENT ASSIGNEE(S): Ferrer Internacional S. A., Spain  
SOURCE: Span., 7 pp. Addn. to Span. 504,511.  
CODEN: SPXXAD  
DOCUMENT TYPE: Patent  
LANGUAGE: Spanish  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ES 525374 19830722 <--	A2	19850201	ES 1983-525374	
ES 504511 19810803 <--	A1	19830101	ES 1981-504511	
PRIORITY APPLN. INFO.: 19810803 <--			ES 1981-504511	

IC ICM C07D333-20  
ICS A61K031-38  
CC 25-17 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)  
Section cross-reference(s): 27  
IT Acylation catalysts  
(aluminum chloride, for salicylate ester with thenoyl chloride derivative)  
IT 98204-42-3P 100462-88-2P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

L16 ANSWER 9 OF 11 HCAPLUS COPYRIGHT 2009 ACS on STN  
TI The Nafion-H-catalyzed acylation of thiophene with acid anhydrides  
AB The reaction of thiophene with acyclic acid anhydrides in the presence of Nafion-H (fluorocarbon resin sulfonic acid) afforded the corresponding 2-acylthiophenes in moderate yields. Acylation with cyclic acid anhydrides gave only low yields. The Nafion-H catalyst could be reused for the acylation with a little loss of activity.  
ACCESSION NUMBER: 1982:217622 HCAPLUS [Full-text](#)  
DOCUMENT NUMBER: 96:217622  
ORIGINAL REFERENCE NO.: 96:35953a,35956a  
TITLE: The Nafion-H-catalyzed acylation of thiophene  
with  
acid anhydrides  
AUTHOR(S): Konishi, Hisatoshi; Suetsugu, Kazuhiro; Okano, Tamon;  
CORPORATE SOURCE: Kiji, Jitsuo  
Fac. Eng., Tottori Univ., Koyama, 680, Japan  
SOURCE: Bulletin of the Chemical Society of Japan (1982), 55(3), 957-8  
CODEN: BCSJA8; ISSN: 0009-2673  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 96:217622  
CC 27-8 (Heterocyclic Compounds (One Hetero Atom))  
IT Acylation catalysts  
(Nafion-H, of thiophene with acid anhydride)  
IT 88-15-3P 135-00-2P 5333-83-5P 13679-75-9P 22971-62-6P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)  
OS.CITING REF COUNT: 7 THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD  
(7 CITINGS)

L16 ANSWER 10 OF 11 HCAPLUS COPYRIGHT 2009 ACS on STN  
TI Acylation of benzothiophene in the presence of small amounts of iron(III) chloride  
AB Acylation of benzo[b]thiophene with p-RC<sub>6</sub>H<sub>4</sub>COCl (R = Me, MeO, H) in the presence of FeC<sub>13</sub> gave 72-5% benzoylated products; with Ac<sub>2</sub>O 70% acetylated product was obtained. In all cases the products consisted of a mixture of 2- and 3-acylated products; the main product was the 3-acylbenzothiophene containing <20-5% 2-acyl product. The acetylbenzothiophenes were oxidized to give the resp. carboxylic acids.  
ACCESSION NUMBER: 1978:615149 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 89:215149  
ORIGINAL REFERENCE NO.: 89:33421a, 33424a  
TITLE: Acylation of benzo thiophene in the presence of small amounts of iron(III) chloride  
AUTHOR(S): Yuldashev, Kh. Yu.  
CORPORATE SOURCE: Tashk. Gos. Univ., Tashkent, USSR  
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1978), (8), 1039-40  
CODEN: KGSSAQ; ISSN: 0453-8234  
DOCUMENT TYPE: Journal  
LANGUAGE: Russian  
OTHER SOURCE(S): CASREACT 89:215149  
CC 27-9 (Heterocyclic Compounds (One Hetero Atom))  
IT Acylation catalysts (ferric chloride, for benzo thiophene)  
IT 7705-08-0, uses and miscellaneous  
RL: CAT (Catalyst use); USES (Uses)  
(acylation catalysts, for benzo thiophene)  
IT 5381-25-9P 6314-28-9P 6454-02-0P 6454-03-1P 68311-49-9P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)  
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD  
(1 CITINGS)

L16 ANSWER 11 OF 11 HCAPLUS COPYRIGHT 2009 ACS on STN  
TI Application of 2-trifluoromethanesulfonyloxy pyridine in trifluoroacetic acid to acylation of aromatics  
AB 2-(Trifluoromethanesulfonyloxy)pyridine (I) in CF<sub>3</sub>CO<sub>2</sub>H was very useful in the condensation of carboxylic acids with fluorene to give 2-acylfluorenes. The reaction of arenes with benzoic acid in the presence of I in CF<sub>3</sub>CO<sub>2</sub>H gave benzoylarenes.  
ACCESSION NUMBER: 1978:6598 HCAPLUS Full-text  
DOCUMENT NUMBER: 88:6598  
ORIGINAL REFERENCE NO.: 88:1113a, 1116a  
TITLE: Application of 2-trifluoromethanesulfonyloxy pyridine in trifluoroacetic acid to acylation of aromatics  
AUTHOR(S): Keumi, Takashi; Saga, Hiroshi; Taniguchi, Rikio; Kitajima, Hidehiko  
CORPORATE SOURCE: Fac. Eng., Fukui Univ., Fukui, Japan  
SOURCE: Chemistry Letters (1977), (9), 1099-102  
CODEN: CMLTAG; ISSN: 0366-7022  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 88:6598  
CC 26-4 (Condensed Aromatic Compounds)  
Section cross-reference(s): 25, 27  
IT Acylation catalysts (2-(trifluoromethanesulfonyloxy)pyridine, for fluorene and benzenes by carboxylic acids)  
IT 135-90-2P 611-94-9P 781-73-7P 954-16-5P 4038-13-5P

4044-60-4P 4885-14-7P 6407-29-0P 6407-30-3P 15860-31-8P  
20852-57-7P 33207-59-9P 65007-01-4P 65007-02-5P  
RL: SPN (Synthetic preparation); PPEP (Preparation)  
(preparation of)

L17 0 S L16 AND (CATION? EXCHANGE?)  
E BANDO SEIJI?/AU  
SET EXPAND CONTINUOUS  
L18 61 S E1-E2  
L19 1 S L18 AND L7

L19 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2009 ACS on STN  
TI Process for preparation of 2-acylthiophene derivatives  
ACCESSION NUMBER: 2005:564653 HCAPLUS Full-text  
DOCUMENT NUMBER: 143:97257  
TITLE: Process for preparation of 2-acylthiophene  
derivatives  
INVENTOR(S): Bando, Seiji; Satake, Syuzo; Kagano,  
Hirokazu  
PATENT ASSIGNEE(S): Sumitomo Seika Chemicals Co., Ltd., Japan  
SOURCE: PCT Int. Appl., 18 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2005058866 20041213	A1	20050630	WO 2004-JP18569	
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AM,	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,			
PT,	EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,			
CA 2544286 20041213	MR, NE, SN, TD, TG A1	20050630	CA 2004-2544286	
EP 1695972	A1	20060830	EP 2004-806930	

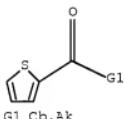
20041213  
 R: CH, DE, ES, FR, GB, IT, LI  
 CN 1886396 A 20061227 CN 2004-80035125  
 20041213  
 CN 100455578 C 20090128  
 IN 2006DN02337 A 20070803 IN 2006-DN2337  
 20060427  
 US 20070149787 A1 20070628 US 2006-579734  
 20060518  
 PRIORITY APPLN. INFO.: JP 2003-419362 A  
 20031217 WO 2004-JP18569 W  
 20041213

L20 1 S L18 AND (L12 OR L14)  
 L21 0 S L20 NOT L19  
     E SATAKE SYUZO?/AU  
 L22 9 S E13-E14  
 L23 1 S L22 AND (L7 OR L12 OR L14)  
 L24 0 S L23 NOT L19  
     E KAGANO HIROKAZU?/AU  
 L25 45 S E26  
 L26 1 S L25 AND (L7 OR L12 OR L14)  
 L27 0 S L26 NOT L19

L1 STRUCTURE UPLOADED

L1 STRUCTURE UPLOADED

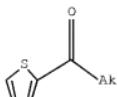
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L2 50 S L1 SSS SAM  
 L3 52482 S L1 SSS FULL  
 L4 STRUCTURE UPLOADED  
 L5 50 S L4 SSS SAM  
 L6 STRUCTURE UPLOADED

L6 STRUCTURE UPLOADED

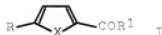
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 L6 HAS NO ANSWERS  
 L6 STR



L7 34589 S L6 SSS FULL  
 L8 50 S SSS SAM L7 SUB=L3  
 L9 34589 S SSS FULL L7 SUB=L3

FILE 'CAPLUS' ENTERED AT 17:40:40 ON 21 SEP 2009  
 L10 11577 S L9  
 L11 5734 S L9/PREP  
 L12 19481 S CATION EXCHANGERS/IT  
 L13 1895 S ACYLATION CATALYSTS/IT  
 L14 26 S L11 AND (L12 OR L13)  
 L15 19 S L14 AND (PY<2003 OR AY<2003 OR PRY<2003)

L15 ANSWER 11 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN  
 TI Furans and long-chain ketones  
 GI



AB Ketones I (X = NH, O, S, alkylimino; R = H, alkyl, alkenyl; R1 = alkyl, aryl, furyl, thiényl) were prepared by acylating the heterocycles with R1CO2H in the presence of (CF3CO)2O and a phosphoric acid catalyst. Thus furan was treated with EtCO2H in the presence of 2 mol (CF3CO)2O and Duolite ES 467 catalyst to give 96% 2-propionylfuran.

ACCESSION NUMBER: 1984:6313 CAPLUS Full-text  
 DOCUMENT NUMBER: 100:6313  
 ORIGINAL REFERENCE NO.: 100:1083a,1086a  
 TITLE: Furans and long-chain ketones  
 INVENTOR(S): Gaset, Antoine; Delmas, Michel  
 PATENT ASSIGNEE(S): Agrifurane S. A., Fr.  
 SOURCE: Fr. Demande, 13 pp.  
 CODEN: FRXXBL  
 DOCUMENT TYPE: Patent  
 LANGUAGE: French  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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FR 2518999 19811228 <--	A1	19830701	FR 1981-24468	
PRIORITY APPLN. INFO.: 19811228 <--			FR 1981-24468	

OTHER SOURCE(S): MARPAT 100:6313  
IC C07D405-06; C07D207-333; C07D207-34; C07D307-46; C07D307-68;  
C07D333-22;  
C07D333-38; C07D409-06  
CC 27-6 (Heterocyclic Compounds (One Hetero Atom))  
IT Acylation catalysts  
(phosphates)  
IT 3194-15-8P 4682-94-4P 6790-19-8P 14360-50-0P 31235-77-5P  
78025-45-3P 86607-62-7P 86607-64-9P 88020-31-9P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of, phosphate catalyst for)  
OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS  
RECORD  
(2 CITINGS)  
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE  
FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT

L15 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN  
TI Aromatic transacylation with acylpolymethylbenzene-trifluoroacetic  
acid

system  
AB The acyl group in acylpolymethylbenzenes is transferred to arenes by the action of acids such as CF<sub>3</sub>CO<sub>2</sub>H (I), CF<sub>3</sub>SO<sub>3</sub>H, and AlCl<sub>3</sub>. I which does not induce the transfer of the Me group is most excellent among the acids. The reaction of various acylpolymethylbenzenes with anisole in I has been examined. A typical reaction was carried out by heating a mixture of acetylpentamethylbenzene, anisole, and I in a molar ratio of 1:1:50, resp., under reflux to give p-acetylanisole and pentamethylbenzene. The reaction is considered to proceed through two steps; the reaction of an acylpolymethylbenzene with I gives a carboxylic trifluoroacetic anhydride and a polymethylbenzene, and then the reactive mixed acid anhydride reacts with an arene to give an acylarene and I.

ACCESSION NUMBER: 1983:106909 CAPLUS Full-text  
DOCUMENT NUMBER: 98:106909  
ORIGINAL REFERENCE NO.: 98:16289a,16292a  
TITLE: Aromatic transacylation with  
acylpolymerbenzene-trifluoroacetic acid  
system  
AUTHOR(S): Keumi, Takashi; Morita, Toshio; Korome, Koichi;  
Ikeda,

Masako; Kitajima, Hidehiko  
CORPORATE SOURCE: Fac. Eng., Fukui Univ., Fukui, 910, Japan  
SOURCE: Nippon Kagaku Kaishi (1982), (11), 1785-90  
CODEN: NKAKB8; ISSN: 0369-4577

DOCUMENT TYPE: Journal  
LANGUAGE: Japanese  
OTHER SOURCE(S): CASREACT 98:106909  
CC 25-16 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)  
IT Acylation catalysts  
(trifluoroacetic acid, for acylpolymethylbenzene with arene)  
IT 88-15-3P 100-06-1P 121-97-1P 611-94-9P 700-12-9P  
781-73-7P 829-20-9P 941-98-0P 2040-20-2P 2040-26-8P 4160-

23886-71-7P 52629-41-1P  
RL: SPN (Synthetic preparation); PPEP (Preparation)  
(preparation of)

L15 ANSWER 13 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN  
TI Ketones  
AB RCOR1 [R = (un)substituted Ph; R1 = Me, PhCH2] were prepared by reaction of RS (X = *iodo*, Br) with R14Sn and CO in the presence of Ni catalyst. Thus, 5.63 + 10-2 mmol Ni(CO)2(PPh3)2, 3.75 mmol PhI, and 1.88 mmol Me4Sn in P(NMe)3 were stirred under 20 atm CO pressure in an autoclave overnight at 120° to give 78% (based on Me4Sn) PhCOMe. Ni(CO)4, Ni(CO)3(PPh3), or NiCl2(PPh3)2 was also used as a catalyst.  
ACCESSION NUMBER: 1982:491945 CAPLUS [Full-text](#)  
DOCUMENT NUMBER: 97:91945  
ORIGINAL REFERENCE NO.: 97:15323a,15326a  
TITLE: Ketones  
PATENT ASSIGNEE(S): Agency of Industrial Sciences and Technology, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 57059818	A	19820410	JP 1980-136447	
19800929 <--				
JP 61016375	B	19860430		
PRIORITY APPLN. INFO.:			JP 1980-136447	
19800929 <--				
IC C07B029-00; C07C045-00; C07C069-76; C07C121-76				
ICA C07D333-10				
CC 25-16 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)				
IT Acylation catalysts (nickel compds., for halobenzenes with carbon monooxide, and tetramethyltin)				
IT 89-15-3P 100-06-1P 103-79-7P 122-00-9P 451-40-1P 1443-80-7P 3609-53-8P				
RL: SPN (Synthetic preparation); PPEP (Preparation) (preparation of)				

L15 ANSWER 16 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN  
TI Phenylpentanone and other ketones  
AB Reaction of RX (R = alkyl, aryl, etc.; X = halo) with R1mMR2n (R1 = alkyl, aryl, etc.; R2 = neg. groups, H, alkyl, aryl, etc.; M = metals, m, n = pos. integers) in the presence of CO and Pd catalysts gave ketones RCOR1. Thus, a mixture of 10.5 mg PhHdI(PPh3)2, 0.84 mL PhI, 1.23 mL Bu4Sn, and 30 atm CO in (Me2N)3PO was autoclaved overnight at 120° to give 441 mg PhCOBu.  
ACCESSION NUMBER: 1981:406827 CAPLUS [Full-text](#)  
DOCUMENT NUMBER: 95:6827  
ORIGINAL REFERENCE NO.: 95:1287a,1290a  
TITLE: Phenylpentanone and other ketones

PATENT ASSIGNEE(S): Agency of Industrial Sciences and Technology,  
Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 56002925	A	19810113	JP 1979-64690	
19790525 <--				
JP 60045606	B	19851011		
PRIORITY APPLN. INFO.:			JP 1979-64690	A
19790525 <--				
IC C07C045-49; C07C049-213; C07C049-76; C07C069-738				
CC 25-16 (Noncondensed Aromatic Compounds)				
IT Acylation catalysts				
(palladium complexes, for alkyl and aryl halides by carbon monoxide and				
tetraalkylstannanes)				
IT 88-15-3P 93-55-0P 94-02-0P 100-06-1P 100-19-6P				
103-79-7P 119-61-9P, preparation 141-79-7P 609-14-3P 769-				
59-5P				
1009-14-9P 1009-61-6P 1443-80-7P 1817-57-8P 1896-62-4P				
5332-96-7P 10537-63-0P 24612-10-0P 38430-55-6P 42762-51-6P				
65085-83-8P 77948-36-8P 77948-37-9P				
RL: SPN (Synthetic preparation); PREP (Preparation)				
(preparation of)				

L15 ANSWER 17 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN  
TI Synthesis of chelate-forming ion exchangers based on polystyrene  
AB To prepare cation exchangers (exchange capacity 0.4-1.5 mmol/g), polystyrene is nitrated, reduced, diazotized, and coupled with 15 chelating compds. containing OH and NH<sub>2</sub> groups, e.g., chromotropic acid, alizarin, morin, dithizone, and ethylenediamine-N,N'-bis(o-hydroxyphenylacetic acid).  
ACCESSION NUMBER: 1981:66489 CAPLUS Full-text  
DOCUMENT NUMBER: 94:66489  
ORIGINAL REFERENCE NO.: 94:10857a,10860a  
TITLE: Synthesis of chelate-forming ion exchangers  
based on polystyrene  
AUTHOR(S): Griesbach, M.; Lieser, K. H.  
CORPORATE SOURCE: Fachber. Anorg. Chem. Kernchem., Tech. Hochsch. Darmstadt, Darmstadt, D-6100, Fed. Rep. Ger.  
SOURCE: Angewandte Makromolekulare Chemie (1980), 90, 143-53  
DOCUMENT TYPE: CODEN: ANMCBO; ISSN: 0003-3146  
LANGUAGE: Journal  
CC 36-4 (Plastics Manufacture and Processing)  
IT Cation exchangers  
(polystyrene derivs. containing chelating groups, preparation of)

IT 60-10-6DP, coupling products with diazotized reduced nitrated polystyrene  
72-48-0DP, coupling products with diazotized reduced nitrated polystyrene  
81-61-8DP, coupling products with diazotized reduced nitrated polystyrene  
87-66-1DP, coupling products with diazotized reduced nitrated polystyrene  
94-93-9DP, coupling products with diazotized reduced nitrated polystyrene  
140-22-7DP, coupling products with diazotized reduced nitrated polystyrene  
148-24-3DP, coupling products with diazotized reduced nitrated polystyrene  
148-25-4DP, coupling products with diazotized reduced nitrated polystyrene  
149-46-2DP, coupling products with diazotized reduced nitrated polystyrene  
326-91-0DP, coupling products with diazotized reduced nitrated polystyrene 480-16-0DP, coupling products with diazotized reduced nitrated polystyrene 536-17-4DP, coupling products with diazotized reduced nitrated polystyrene 1149-16-2DP, coupling products with diazotized reduced nitrated polystyrene 1170-02-1DP, coupling products with diazotized reduced nitrated polystyrene 3012-52-0DP, coupling products with diazotized reduced nitrated polystyrene 9003-53-6DP, amino derivs., diazotized, coupling products with chelating compds.  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of, as cation exchangers)

OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD

(5 CITINGS)

L15 ANSWER 18 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN

TI Polyamine-based ion-exchange resins

AB A divinylbenzene-styrene copolymer (I) is nitrated, reduced, diazotized, and coupled with Tiron, N,N'-disalicylidene-1,2-ethanediamine, chromotropic acid, alizarin, pyrogallol, 4-methoxy-2-(thiazol-2-ylazo)phenol, 1,1,1-trifluoro-3-(2-thenoyl)acetone, dithizone, or one of five similar compds. to prepare ion exchangers which have rapid exchange rates, high selectivity, and good stability and are useful for separating metal ions or anions from aqueous or organic solns. A reducing agent is used to prevent the formation of phenolic OH groups during the coupling reaction. Thus, I (0.1-0.2 mm particles) is nitrated (to give 10.57% N content), reduced, diazotized and coupled with Tiron to prepare a cation exchange resin with exchange capacity 1.0 mmol/g.

ACCESSION NUMBER: 1980:640518 CAPLUS Full-text

DOCUMENT NUMBER: 93:240518

ORIGINAL REFERENCE NO.: 93:38553a,38556a

TITLE: Polyamine-based ion-exchange resins

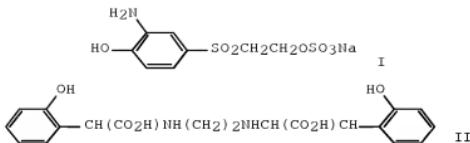
INVENTOR(S): Lieser, Karl Heinrich; Griesbach, Manfred;  
Burba,

Peter

PATENT ASSIGNEE(S): Riedel-de Haen A.-G., Fed. Rep. Ger.  
SOURCE: Eur. Pat. Appl., 22 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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EP 14222 19790208 <-- R: BE, FR, GB, IT, NL, SE	A1	19800820	EP 1979-100358	
PRIORITY APPLN. INFO.: 19790208 <--			EP 1979-100358	
IC C08F008-30; C08F008-00; B01J045-00 CC 36-3 (Plastics Manufacture and Processing) IT Anion exchangers Cation exchangers (azo group-containing derivs. of crosslinked polystyrene, manufacture of)				
IT 60-10-6DP, reaction products with diazotized aminated divinylbenzene-styrene copolymer 72-48-0DP, reaction products with diazotized aminated divinylbenzene-styrene copolymer 81-61-8DP, reaction products with diazotized aminated divinylbenzene-styrene copolymer 87-66-1DP, reaction products with diazotized aminated divinylbenzene-styrene copolymer 94-93-9DP, reaction products with diazotized aminated divinylbenzene-styrene copolymer 140-22-7DP, reaction products with diazotized aminated divinylbenzene-styrene copolymer 148-25-4DP, reaction products with diazotized aminated divinylbenzene-styrene copolymer 149-45-1DP, reaction products with diazotized aminated divinylbenzene-styrene copolymer 326-91-0DP , reaction products with diazotized aminated divinylbenzene-styrene copolymer 480-16-0DP, reaction products with diazotized aminated divinylbenzene-styrene copolymer 536-17-4DP, reaction products with diazotized aminated divinylbenzene-styrene copolymer 1149-16-2DP, reaction products with diazotized aminated divinylbenzene-styrene copolymer 1170-02-1DP, reaction products with diazotized aminated divinylbenzene-styrene copolymer 3012-52-0DP, reaction products with diazotized aminated divinylbenzene-styrene copolymer 9003-70-7DP, aminated, diazotized, derivs.				
RL: RPEP (Preparation) (ion exchangers, manufacture of)				
OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD				
		(2 CITINGS)		

L15 ANSWER 19 OF 19 CAPLUS COPYRIGHT 2009 ACS on STN  
TI Preparation of purified chelating cellulose exchange filters  
GI



AB Treating 5 g HCHO-crosslinked cellulose with 10.6 g Na 2-[(3-amino-4-hydroxyphenyl)sulfonyl]ethyl sulfate(I) in the presence of 2.5 g NaOH for 31 h at 75° gave an ester with N content apprx.0.55 mmol/g. Diazotization of this product and coupling with β-naphthol, 2,2'-ethylenediamine-N,N'-bis[o-hydroxybenzeneacetic acid](II) or 1-(2-thenoyl)-3,3-trifluoracetone gave cation exchangers with exchange capacity 0.2-0.55 mmol/g. After use, the cation exchangers were purified with H2O, Me2CO, and pyridine to give regenerated products containing 0.000002-0.0084% metal residues.

ACCESSION NUMBER: 1980:182726 CAPLUS [Full-text](#)

DOCUMENT NUMBER: 92:182726

ORIGINAL REFERENCE NO.: 92:29617a,29620a

TITLE: Preparation of purified chelating cellulose exchange filters

AUTHOR(S): Roeber, H. M.; Burba, P.; Lieser, K. H.

CORPORATE SOURCE: Fachber. Anorg. Chem. Kernchem., Tech. Hochsch. Darmstadt, Darmstadt, 6100, Fed. Rep. Ger.

SOURCE: Angewandte Makromolekulare Chemie (1980), 85, 137-48

CODEN: ANMCBO; ISSN: 0003-3146

DOCUMENT TYPE: Journal

LANGUAGE: German

CC 43-3 (Cellulose, Lignin, Paper, and Other Wood Products)

IT Cation exchangers

(cellulose-based, manufacture of)

IT 135-19-3DP, coupling products with diazotized cellulose aminophenol derivs. 326-51-0DP, coupling products with diazotized cellulose aminophenol derivs. 1170-02-1DP, coupling products with diazotized cellulose aminophenol derivs.

RL: PREP (Preparation)

(cation exchangers, purification of)

IT 73561-56-5DP, diazotizaion and coupling products

RL: PREP (Preparation)

(preparation of, for cation exchangers)